This invention relates to compounds of formula (I):

$$\begin{array}{c|c}
R^{1} & R'' \\
\downarrow & A \\
R''' & R^{2} \\
\end{array}$$
(I)

wherein:

A is C(O) or CH(OH);

R¹ is

$$R^4$$
 R^3
 R^3

 $R^2 \text{ is H, C}_{1\text{-}6}\text{alkyl, C}_{3\text{-}6}\text{cycloalkyl-C}_{0\text{-}6}\text{alkyl, Ar-C}_{0\text{-}6}\text{alkyl, Het-C}_{0\text{-}6}\text{alkyl, R}^5\text{C(O)-, R}^5\text{C(S)-, R}^5\text{SO}_{2\text{-}}, R^5\text{OC(O)-, R}^5\text{R'NC(O)-, R}^5\text{R'NC(S)-, adamantyl-C(O)-, or R}^5\text{R'NC(S)-, adamantyl-C(O)-, or R}^5\text{R'NC(S)-, R}^5\text{R'NC(S)-, adamantyl-C(O)-, or R}^5\text{R'NC(S)-, R}^5\text{R'NC$

$$R^7 \xrightarrow{R^6} X \xrightarrow{Z} X$$

R" is H, C_{1-6} alkyl, Ar- C_{0-6} alkyl, or Het- C_{0-6} alkyl,

 $R^{\prime\prime\prime} \text{ is H, C$_{1-6}$alkyl, C$_{3-6}$cycloalkyl-C$_{0-6}$alkyl, Ar-C$_{0-6}$alkyl, or Het-C$_{0-6}$alkyl; }$

each R³ independently is H, C₂₋₆alkenyl, C₂₋₆alkynyl, Het, Ar or C₁₋₆alkyl optionally substituted by OR', SR', NR'2, R'NC(O)OR⁵, CO₂R', CO₂NR'2, N(C=NH)NH₂, Het or Ar;

 R^4 is H, C_{1-6} alkyl, C_{3-6} cycloalkyl- C_{0-6} alkyl, Ar- C_{0-6} alkyl, Het- C_{0-6} alkyl, R^5 C(O)-, $R^5C(S)$ -, R^5SO_2 -, $R^5OC(O)$ -, $R^5R'NC(O)$ -, $R^5R'NC(S)$ -, R'HNCH(R')C(O)-, or $R^5OC(O)NR'CH(R')C(Q)$ -;

each R⁵ independently is C₃₋₆cycloalkyl-C₀₋₆alkyl, Ar-C₀₋₆alkyl, Het-C₀₋₆alkyl, Ar-C₀₋ 6alkoxy, Het-C₀₋₆alkoxy, or C₁-6alkyl optionally substituted by OR', SR', NR'₂, R'NC(O)OR⁵, CO₂R', CO₂NR'₂, N(C=NH)NH₂, Het or Ar;

R⁶ is H, C₁₋₆alkyl, Ar-C₀₋₆alkyl, or Het-C₀₋₆alkyl and R⁷ is H, C₁₋₆alkyl, C₃₋₆cycloalkyl- C_{0-6} alkyl, Ar- C_{0-6} alkyl, Het- C_{0-6} alkyl, R⁵C(O)-, R⁵C(S)-, R⁵SO₂-, R⁵OC(O)-, R⁵R'NC(O)-, R⁵R'NC(S)-, R'HNCH(R')C(O)-, or R⁵OC(O)NR'CH(R')C(O)-; or R⁶ and R⁷ are connected to form a pyrrolidine, a piperidine, or a morpholine ring;

each R' independently is H, C₁₋₆alkyl, Ar-C₀₋₆alkyl, or Het-C₀₋₆alkyl; R* is H, C₁₋₆alkyl, C₃₋₆cycloalkyl-C₀₋₆alkyl, Ar-C₀₋₆alkyl, or Het-C₀₋₆alkyl; Y is a single bond or O; each Z independently is CO or CH2; and n is 0, 1, or 2;

or a pharmaceutically acceptable salt thereof, which are inhibitors of cysteine proteases, particularly cathepsin K, and are useful in the treatment of diseases in which inhibition of bone loss is a factor.